

[HOSPITAL / HEALTH AUTHORITY NAME]

ALTERED MENTAL STATUS AND REDUCED LEVEL OF CONSCIOUSNESS PATHWAY

Protocol 17: Rapid Stabilization, Reversible-Cause Treatment, Neurological and Toxic-Metabolic Differentiation, Reassessment, and Safe Disposition

DRAFT FOR EMERGENCY MEDICINE, INTERNAL MEDICINE, ANAESTHESIA, CRITICAL CARE, NEUROLOGY, PAEDIATRICS, OBSTETRICS, PSYCHIATRY, TOXICOLOGY, PHARMACY, LABORATORY, RADIOLOGY, NURSING, SECURITY, TRANSFER, AND CLINICAL-GOVERNANCE REVIEW

IMMEDIATE SAFETY RULE: Altered mental status is a syndrome, not a diagnosis. Protect the airway and cervical spine when indicated; support oxygenation, ventilation, and circulation; check bedside glucose immediately; treat seizures, opioid-induced respiratory depression, hypoglycaemia, hyperthermia, and other reversible threats as they are recognized. Do not attribute reduced consciousness or abnormal behaviour to alcohol, drugs, dementia, psychiatric illness, or “non-compliance” until serious medical, neurological, traumatic, toxicological, metabolic, and environmental causes have been actively considered.

STATUS: This is a draft clinical-governance document. Exact medication doses, reversal agents, glucose preparations, sedation regimens, imaging thresholds, lumbar-puncture criteria, paediatric parameters, monitoring frequencies, referral arrangements, and transfer capabilities must be approved locally and aligned with the hospital formulary, staff competencies, laboratory and imaging access, and available critical-care, neurology, neurosurgical, toxicology, psychiatric, obstetric, and paediatric services.

Document control	Details
Document owner	Emergency Department / Medical Services Directorate / Nursing Services / Clinical Governance
Clinical leads	Emergency Medicine; Internal Medicine; Anaesthesia / Critical Care; Neurology; Paediatrics
Supporting departments	Obstetrics; Psychiatry; Pharmacy; Laboratory; Radiology; Toxicology / Poison Centre; Security; Patient Transport
Applies to	All clinical and support staff involved in triage, assessment, stabilization, monitoring, investigation, treatment, transfer, and disposition of patients with altered mental status or reduced consciousness
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Related protocols	Protocols 1–16; local airway, resuscitation, stroke, seizure/status epilepticus, head injury, sepsis, toxicology, diabetic emergency, behavioural emergency, restraint, safeguarding, admission, and transfer pathways

1. Purpose

To provide a standardized, time-sensitive, and auditable pathway for patients with acute or acutely worsening confusion, delirium, abnormal behaviour, reduced interaction, somnolence, stupor, coma, or unexplained fluctuation in consciousness from first clinical contact until the cause is treated, responsibility is transferred, or the patient is safely discharged.

The protocol aims to prevent avoidable harm from delayed airway protection, missed hypoglycaemia, hypoxia or hypercapnia, delayed stroke or seizure recognition, occult trauma, untreated infection, poisoning, diagnostic anchoring, inadequate reassessment, inappropriate restraint, and unsafe discharge.

2. Scope

This protocol applies to adults, adolescents, and children, including pregnant or recently pregnant patients, older adults, people with dementia or disability, patients with suspected intoxication or poisoning, and patients whose mental status deteriorates during an Emergency Department encounter.

It supplements condition-specific pathways. It does not replace advanced airway, cardiac arrest, trauma, stroke, status epilepticus, meningitis/encephalitis, sepsis, diabetic emergency, toxicology, behavioural emergency, neonatal, or paediatric resuscitation algorithms. Age-specific paediatric thresholds, equipment, doses, and safeguarding processes must be used for children.

3. Core policy statements

- Every patient with acute altered mental status shall receive an immediate visual safety screen, ABCDE assessment, bedside glucose, temperature, level-of-consciousness assessment, and review for trauma, seizure, focal neurology, poisoning, and infection before routine administrative processes.
- Unresponsiveness, inability to protect the airway, inadequate ventilation, rapidly falling GCS, ongoing or recurrent seizure, new focal deficit, shock, severe hypoxaemia, suspected intracranial catastrophe, major poisoning, or severe temperature abnormality requires Red / immediate care in a resuscitation-capable area.
- AVPU may be used for rapid recognition, but GCS components, pupils, motor symmetry, speech, behaviour, baseline function, and serial trend shall be documented for significant or persistent impairment.
- A GCS of 8 or lower, a rapidly declining score, absent protective reflexes, ineffective ventilation, or anticipated deterioration requires immediate airway-skilled review. The decision to intubate shall be based on airway protection, oxygenation, ventilation, physiology, trajectory, procedure and transport needs—not on a number alone.
- Bedside glucose shall be checked as early as possible in all patients with unexplained altered mental status. Confirmatory testing must not delay treatment of clinically important hypoglycaemia.
- Naloxone shall be used when opioid toxicity with respiratory depression is suspected, titrated to restore adequate ventilation while airway and ventilatory support continue. A transient response does not end monitoring or exclude co-ingestion, trauma, hypoxia, or another diagnosis.
- Last-known-well time, symptom onset, baseline cognition and function, and collateral history shall be actively sought. Lack of history increases risk and must not be interpreted as reassurance.
- New confusion in an older adult is delirium until assessed otherwise. Hypoactive delirium is easily missed. Once immediate threats are controlled, use an approved tool such as the 4AT for adults; use CAM-ICU or ICDSC in critical-care environments.
- Neuroimaging shall be driven by clinical risk. Urgent non-contrast CT is indicated when intracranial haemorrhage, stroke, trauma, raised intracranial pressure, focal deficit, persistent unexplained reduced consciousness, or another structural cause is plausible. Imaging must not delay treatment of hypoglycaemia, seizures, sepsis, meningitis, or poisoning.
- When meningitis or encephalitis is suspected, obtain cultures and perform lumbar puncture when safe and timely, but do not delay indicated empiric antimicrobial or antiviral therapy for imaging or lumbar puncture.
- Physical restraint and emergency sedation are safety interventions of last resort. De-escalation, treatment of pain and reversible causes, the least restrictive method, continuous monitoring, frequent review, and documented release criteria are required.
- No patient shall be discharged with persistent unexplained altered mental status, unstable physiology, recurrent symptoms, unsafe mobility or swallowing, unresolved capacity concerns, inadequate supervision, or unassigned pending results.

4. Definitions

Term	Operational definition
Altered mental status (AMS)	An acute or acutely worsening change in awareness, attention, cognition, perception, behaviour, psychomotor activity, or level of consciousness.
Reduced level of consciousness	Diminished arousal or responsiveness ranging from drowsiness to stupor and coma.
Coma	A state of unarousable unresponsiveness in which the patient does not obey commands, speak, or purposefully interact.
Delirium	An acute and fluctuating disturbance of attention, awareness, and cognition caused by an underlying medical condition, drug, toxin, withdrawal state, or multiple factors.
Encephalopathy	Global brain dysfunction due to toxic, metabolic, infectious, inflammatory, hypoxic, structural, or systemic disease; it describes a syndrome and does not identify the cause.
Last known well	The last time the patient was observed at their usual neurological baseline; this time anchors stroke and other time-critical decisions.
Postictal state	A transient period of altered consciousness, cognition, behaviour, or focal deficit after a seizure. Persistence, deterioration, or atypical features require reassessment for ongoing seizure or another cause.
Non-convulsive status epilepticus	Ongoing electrographic seizure activity presenting primarily as altered consciousness, subtle motor findings, or unexplained failure to recover.
Baseline mental status	The patient's usual cognition, communication, behaviour, function, and level of alertness before the current illness.

Term	Operational definition
Decision-making capacity	The ability, for the specific decision at the specific time, to understand relevant information, appreciate consequences, reason about options, and communicate a choice.
Clinical sobriety	Sufficient recovery of cognition, speech, coordination, mobility, judgement, and physiological stability for a safe assessment and disposition; a laboratory alcohol concentration alone does not establish readiness for discharge.

5. Roles and accountability

Role	Minimum accountability
Triage / receiving nurse	Recognize danger signs; assign acuity; begin immediate observations and glucose; apply trauma and infection precautions; activate resuscitation, stroke, seizure, sepsis, toxicology, or safeguarding responses; expedite clinician review.
ED nurse	Establish monitoring and access; record serial AVPU/GCS and pupils; administer authorized treatment; protect airway and skin; prevent falls and aspiration; obtain collateral information; reassess and escalate deterioration.
ED clinician / team leader	Lead ABCDE stabilization, differential diagnosis, targeted investigations, time-critical treatment, consultation, capacity assessment, documentation, and disposition; retain responsibility until explicit handover.
Senior ED / acute-care physician	Review coma, persistent or unexplained impairment, focal findings, poisoning, refractory agitation, recurrent seizure, uncertain capacity, paediatric or maternal cases, and any patient requiring airway, invasive treatment, critical care, or transfer.
Anaesthesia / critical care	Support advanced airway management, ventilation, haemodynamic stabilization, invasive monitoring, organ support, sedation, and critical-care disposition or transfer.
Neurology / stroke / neurosurgery	Support stroke activation, seizure and EEG decisions, intracranial pathology, encephalitis, neurosurgical emergencies, and transfer to definitive care.
Paediatrics / obstetrics	Provide age- or pregnancy-specific assessment and treatment; activate neonatal, maternal, fetal, safeguarding, and transfer pathways.
Psychiatry / behavioural health	Assess psychiatric and behavioural contributors only after emergency medical evaluation and stabilization; support capacity, suicide risk, and safe disposition.
Pharmacy / toxicology / poison centre	Support medication reconciliation, antidotes, interaction and withdrawal assessment, dosing, compatibility, toxicology advice, and monitoring duration.
Laboratory / radiology	Prioritize time-critical testing and imaging, communicate critical findings directly, and maintain a process for result ownership.
Security / portering	Support a safe environment and least-restrictive movement or containment under clinical direction; never obstruct urgent assessment, family access when appropriate, or treatment.
Transfer / bed-management team	Secure appropriate monitored placement, receiving acceptance, transport platform, escort, equipment, and continuity of treatment without interrupting stabilization.

6. Pathway activation and triage

Activate this pathway for acute or unexplained confusion, disorientation, abnormal behaviour, reduced interaction, agitation, hallucination, drowsiness, stupor, unresponsiveness, a new change from cognitive baseline, or failure to recover as expected after seizure, sedation, anaesthesia, intoxication, or hypoglycaemia.

Category	Operational criteria
RED / immediate	Unresponsive or rapidly declining; GCS 8 or lower or unable to protect airway; inadequate breathing, hypoxaemia, hypercapnia, shock, severe glucose abnormality; ongoing/recurrent seizure; new focal deficit or suspected stroke; head injury with reduced consciousness; signs of raised intracranial pressure; meningism or non-blanching rash with illness; severe poisoning; severe hyperthermia or hypothermia; eclampsia; or clinician concern for imminent deterioration.
YELLOW / urgent	New confusion or delirium without immediate airway/circulatory threat; persistent postictal state; stable suspected intoxication; medication effect; older adult with acute functional or behavioural change; unexplained falls; or persistent drowsiness with stable observations.
GREEN / lower acuity	Rarely appropriate for a current acute change. May be considered only after a clinician has confirmed return to baseline, reassuring observations, no high-risk context, and a reliable plan for reassessment. Administrative triage alone must not assign acute AMS to a low-acuity stream.

DO NOT MISS: A quiet, sleepy, “pleasantly confused,” intoxicated, disabled, or elderly patient can be critically ill. Hypoactive delirium, hypercapnia, occult head injury, non-convulsive seizure, sepsis, and intracranial haemorrhage are common pathways to delayed recognition.

7. The first 5 minutes

Target	Required action
0–1 minute	Check responsiveness, pulse, airway patency, breathing adequacy, major trauma and bleeding. Begin CPR if required. Call for resuscitation and airway-skilled help. Use cervical-spine precautions when mechanism or examination indicates.
0–3 minutes	Attach pulse oximetry, ECG, and cycling blood pressure; measure temperature; assess AVPU/GCS and pupils; obtain bedside glucose; provide oxygen or bag-mask ventilation when indicated; position and suction the airway.
0–5 minutes	Establish IV/IO access when needed; treat hypoglycaemia, active seizure, opioid-related respiratory depression, shock, anaphylaxis, and severe temperature abnormality; obtain last-known-well and baseline; perform a rapid focal-neurology and trauma screen.
Within first resuscitation cycle	Activate stroke, trauma, sepsis, meningitis/encephalitis, toxicology, diabetic emergency, obstetric, or paediatric pathway as indicated. Draw urgent tests without delaying treatment. Decide whether immediate CT, airway control, antidote, antimicrobial therapy, or transfer is required.
Continuous	Assign a team leader and recorder. Reassess airway, ventilation, circulation, GCS/AVPU, pupils, glucose response, and focal findings after every intervention and any change in condition.

8. Assessing consciousness and neurological change

8.1 Rapid assessment

- Use AVPU for immediate recognition: Alert; responds to Voice; responds to Pain; Unresponsive.
- Record the full GCS as eye, verbal, and motor components rather than a total score alone. Use age-appropriate paediatric scoring and document barriers such as intubation, language, deafness, aphasia, developmental difference, or sedation.
- Record pupil size, equality, reactivity, gaze position, facial symmetry, limb movement, speech/language, and response to command.
- Compare with the patient’s documented or collateral baseline. A “normal” score may still represent a major decline in a person with high premorbid function; a low chronic baseline must not conceal acute deterioration.
- Any decline in consciousness, new anisocoria, new focal deficit, repeated vomiting, new seizure, or worsening headache requires immediate senior reassessment and consideration of urgent imaging and airway control.

8.2 Delirium screening once immediate threats are controlled

- Look for acute onset and fluctuation, inattention, disorganized thinking, altered arousal, sleep-wake disturbance, perceptual change, new reduced mobility, withdrawal, or agitation.
- Use the 4AT in adults when delirium is suspected. In critical care or post-anaesthesia recovery use CAM-ICU or ICDSC according to local policy.
- If delirium and dementia are difficult to distinguish, manage delirium and its causes first. Obtain collateral history from family, caregivers, residential staff, or prior records.
- Document delirium explicitly and communicate it at handover; do not use vague labels such as “confused elderly” or “behavioural.”

9. Immediate stabilization: ABCDE

9.1 Airway and cervical spine

- Position the patient, open the airway, remove visible obstruction, suction secretions or vomitus, and use airway adjuncts when appropriate.
- Use a jaw thrust and cervical-spine protection when trauma is possible. Intoxication does not exclude cervical injury.
- Place a spontaneously breathing patient who cannot maintain a safe supine airway in an appropriate lateral/recovery position when trauma, procedures, and monitoring permit.
- Call anaesthesia / critical care early for absent or weakening protective reflexes, recurrent aspiration, persistent vomiting with reduced consciousness, severe agitation preventing life-saving care, anticipated transfer, or a declining trajectory.
- Prepare for haemodynamic instability and difficult airway conditions. Preoxygenate, optimize circulation, identify the post-intubation sedation and ventilation plan, and reassess neurological findings after stabilization.

9.2 Breathing

- Assess respiratory rate, depth, pattern, work, oxygen saturation, chest movement, breath sounds, and evidence of respiratory fatigue.
- Provide oxygen for hypoxaemia or critical illness and titrate to the locally approved target. Assist ventilation promptly when breathing is slow, shallow, obstructed, or ineffective.
- Use waveform capnography when available for ventilated patients and for significant respiratory depression, sedation, or opioid toxicity. A normal pulse oximeter reading on supplemental oxygen does not exclude hypoventilation and hypercapnia.
- Obtain blood gas when hypercapnia, severe hypoxaemia, metabolic disturbance, shock, poisoning, or ventilatory failure is suspected.
- For suspected carbon monoxide exposure, remove from exposure, give high-concentration oxygen, obtain co-oximetry, and seek toxicology/hyperbaric advice according to local capability. Standard pulse oximetry can be misleading.

9.3 Circulation

- Assess pulse, blood pressure, capillary refill, skin temperature and colour, rhythm, bleeding, hydration, and urine output when indicated.
- Treat shock according to mechanism. Avoid reflexive fluid loading when cardiogenic, obstructive, renal, or intracranial causes are possible.
- Obtain ECG early because arrhythmia, myocardial ischaemia, QT/QRS toxicity, hyperkalaemia, hypothermia, and drug effects may present primarily as altered consciousness.
- Correct severe hypotension promptly and consider occult haemorrhage, sepsis, anaphylaxis, adrenal crisis, cardiac disease, pulmonary embolism, and poisoning.

9.4 Disability

- Check glucose immediately and repeat after treatment until stable. If hypoglycaemia is present, administer locally approved IV/IO dextrose or glucagon when vascular access is unavailable, then identify and treat the cause.
- Do not delay glucose for thiamine. Give parenteral thiamine promptly to patients at risk of Wernicke encephalopathy or severe malnutrition, preferably before or with carbohydrate when this can occur without delay.
- Treat convulsive seizure lasting 5 minutes or recurrent seizures without recovery as status epilepticus under the approved pathway. Protect from injury; do not restrain the convulsion or place objects in the mouth.
- If opioid toxicity with respiratory depression is suspected, support ventilation and administer naloxone according to the approved route and titration protocol. Observe for recurrent toxicity because naloxone may wear off before the opioid.
- Perform rapid stroke screening and document last-known-well. Atypical presentations, posterior-circulation stroke, aphasia, neglect, visual change, ataxia, or isolated reduced consciousness may be missed by simple face-arm-speech screens.

9.5 Exposure and environment

- Fully inspect for trauma, needle marks, transdermal patches, rashes, pressure injury, infection, bites, burns, track marks, medical-alert identification, medication devices, and evidence of neglect or assault while preserving dignity and temperature.
- Measure core temperature when severe temperature disorder is possible. Begin active cooling for heat stroke and controlled rewarming for clinically important hypothermia under local protocols.
- Consider environmental exposure affecting more than one person: carbon monoxide, toxic gas, heat, cold, contaminated food, or occupational chemicals. Protect staff and activate decontamination or hazardous-material procedures when needed.

10. Focused history and collateral information

History should proceed in parallel with stabilization. Use the patient, family, caregivers, ambulance staff, police when appropriate, medication containers, pharmacy records, electronic records, residential-facility staff, and witnesses. Record the source and reliability of each account.

Domain	Key questions
Time course	Exact onset, last known well, sudden versus gradual, progression, fluctuation, previous episodes, recovery after treatment or seizure.
Baseline	Usual cognition, communication, behaviour, mobility, independence, sleep, sensory impairment, dementia or developmental condition.
Associated symptoms	Headache, fever, neck stiffness, rash, seizure, weakness, speech or visual change, chest pain, dyspnoea, vomiting, diarrhoea, urinary symptoms, pain, falls, trauma.
Medication and treatment	Insulin and glucose-lowering medicines, opioids, sedatives, anticholinergics, antihistamines, psychotropics, anticonvulsants, steroids, anticoagulants, recent dose changes, missed doses, renal dosing, recent procedures.
Substances and toxins	Alcohol, recreational drugs, synthetic opioids, cannabis products, solvents, pesticides, herbal products, intentional overdose, withdrawal, occupational or household exposure.
Medical context	Diabetes, epilepsy, stroke, head injury, infection, renal/hepatic failure, endocrine disease, cancer, immunocompromise, pregnancy/postpartum state, psychiatric illness, recent hospitalization.
Social and safety context	Living arrangements, supervision, access to medication or toxins, self-harm risk, safeguarding, domestic violence, neglect, food insecurity, heat exposure, and ability to return for care.

11. Focused examination

Examination domain	Minimum assessment
General and vital signs	Complete and trend respiratory rate, SpO ₂ , heart rate/rhythm, blood pressure, temperature, pain, capillary refill, and glucose. Note odour only as a clue; it is not diagnostic.
Neurological	GCS components, attention, orientation when possible, speech/language, pupils, gaze, cranial nerves, motor asymmetry, tone, reflexes when useful, plantar response, coordination/gait only when safe, meningism, seizure activity.
Head and trauma	Scalp injury, basilar skull signs, oral injury, tongue bite, bleeding, cervical tenderness, anticoagulant use, and signs of non-accidental injury.
Cardiorespiratory	Ventilation, breath sounds, signs of aspiration or pulmonary oedema, murmurs, pulse deficits, arrhythmia, endocarditis signs, heart failure, shock.
Abdomen and genitourinary	Tenderness, distension, retention, constipation, liver disease, peritonism, pregnancy-related findings, device infection.
Skin and toxidromes	Moisture/dryness, flushing/pallor, diaphoresis, piloerection, track marks, patches, rash, petechiae/purpura, cellulitis, pressure areas, signs of abuse or neglect.
Functional and sensory	Hearing aids, glasses, communication needs, mobility, continence, swallowing, and comparison with baseline.
Mental state and capacity	Attention, thought form/content, hallucinations, mood, suicidality, capacity for specific decisions, and risk to self or others after medical stabilization.

12. Time-critical and reversible causes

Cause	Immediate response
Hypoglycaemia	Immediate glucose; treat promptly; recheck; identify prolonged-action drug, sepsis, liver failure, malnutrition, adrenal disease, or intentional exposure.
Hypoxia / hypercapnia	Oxygen and ventilatory support; blood gas/capnography; treat airway obstruction, asthma/COPD, pulmonary oedema, pneumonia, neuromuscular failure, or sedative effect.
Opioid toxicity	Ventilate; naloxone titrated to adequate breathing; ECG and co-ingestion assessment; prolonged observation or infusion when recurrent toxicity or long-acting opioid is suspected.
Status epilepticus	Time seizure; first-line benzodiazepine per protocol; second-line antiseizure medicine without delay; glucose/electrolytes; airway and cause evaluation; EEG for persistent impairment.
Stroke / intracranial haemorrhage	Record last-known-well; activate stroke pathway; urgent CT/vascular imaging; manage airway, blood pressure, anticoagulant reversal, reperfusion eligibility, and transfer.
Meningitis / encephalitis	Cultures and infection precautions; early empiric antimicrobial/antiviral therapy when indicated; lumbar puncture when safe; do not delay therapy for CT or LP.
Head injury	Trauma pathway; cervical protection; urgent CT by approved criteria; reverse anticoagulation when indicated; serial GCS/pupils; neurosurgical consultation.
Severe sodium or other electrolyte disturbance	ECG and urgent laboratory confirmation; controlled correction under approved protocol; hypertonic saline for severe symptomatic hyponatraemia with seizure/coma when indicated.
DKA / HHS and other metabolic crisis	Glucose, ketones, osmolality, electrolytes, acid-base assessment; fluids, insulin, potassium, and precipitant treatment under diabetic emergency protocol.
Temperature emergency	Immediate cooling for heat stroke; controlled rewarming for hypothermia; manage rhabdomyolysis, coagulopathy, arrhythmia, and organ failure.
Carbon monoxide / toxic gas	Remove exposure; high-concentration oxygen; co-oximetry and ECG/troponin when indicated; toxicology/hyperbaric consultation; assess co-exposed persons.
Eclampsia / maternal emergency	Pregnancy and postpartum status; magnesium and blood-pressure management under obstetric protocol; urgent obstetric/anaesthetic support; consider cerebral venous thrombosis and haemorrhage.
Adrenal, thyroid, hepatic or uraemic crisis	Cause-specific labs and immediate supportive/corrective therapy; early specialist and critical-care input for coma, shock, severe temperature abnormality, or organ failure.

13. Structured differential diagnosis

Category	Examples
Structural / vascular	Ischaemic stroke, intracranial haemorrhage, subarachnoid haemorrhage, subdural/epidural collection, tumour, hydrocephalus, raised intracranial pressure, posterior reversible encephalopathy syndrome.
Seizure-related	Convulsive or non-convulsive status, postictal state, medication non-adherence, withdrawal, infection, metabolic trigger.
Infectious / inflammatory	Sepsis, meningitis, encephalitis, cerebral abscess, endocarditis, tropical or travel-associated infection, autoimmune encephalitis.
Respiratory / circulatory	Hypoxaemia, hypercapnia, shock, arrhythmia, myocardial infarction, pulmonary embolism, hypertensive emergency.
Metabolic / endocrine	Hypo- or hyperglycaemia, sodium/calcium/magnesium disorder, acid-base disorder, adrenal crisis, myxoedema coma, thyroid storm, hepatic or uraemic encephalopathy, nutritional deficiency.

Category	Examples
Toxicologic / medication	Opioids, sedative-hypnotics, alcohol, anticholinergics, sympathomimetics, serotonergic drugs, neuroleptic malignant syndrome, salicylate, acetaminophen, carbon monoxide, pesticides, polypharmacy, drug interactions.
Traumatic / environmental	Head injury, occult haemorrhage, hypothermia, heat stroke, drowning, electrical injury, toxic gas, decompression or altitude illness.
Pain / retention / functional stressors	Severe pain, urinary retention, constipation, sleep deprivation, sensory deprivation, unfamiliar environment—often contributors to delirium rather than sole explanations.
Psychiatric / functional	Psychosis, catatonia, severe mood disorder, dissociative or functional presentation. These diagnoses require appropriate medical assessment and must not be used to explain coma, unstable physiology, focal signs, or a new cognitive change without evidence.

14. Investigations

14.1 Immediate bedside investigations

- Bedside glucose for every unexplained presentation; repeat after treatment and whenever symptoms recur.
- ECG for significant AMS, syncope/collapse, poisoning, electrolyte disturbance, hypothermia, chest symptoms, or unexplained tachycardia/bradycardia.
- Pulse oximetry and respiratory assessment; capnography and blood gas when ventilation is uncertain or sedation/opioid toxicity is present.
- Pregnancy test when pregnancy is possible and results affect imaging, medication, differential diagnosis, or disposition—without delaying life-saving care.
- Point-of-care ultrasound when trained staff and equipment are available to assess shock, cardiac function, urinary retention, pregnancy, trauma, or another focused question.

14.2 Laboratory testing

Indication	Suggested tests
Common core in significant/persistent AMS	Full blood count; electrolytes including sodium, potassium, calcium and magnesium as locally available; renal and liver function; glucose; blood gas and lactate when indicated.
Infection	Blood cultures before antimicrobials when feasible without delay; urine/source specimens; malaria, dengue, leptospirosis, HIV, or outbreak testing according to epidemiology and exposure.
Toxicology	Acetaminophen and salicylate concentrations when intentional or uncertain ingestion is possible; ethanol where useful; specific levels for lithium, digoxin, valproate, carbamazepine, theophylline, toxic alcohols, or other agents when clinically indicated.
Metabolic / endocrine	Ketones, measured/calculated osmolality, ammonia, cortisol, thyroid testing, creatine kinase, carboxyhaemoglobin, methaemoglobin, or nutritional markers only when the clinical context supports them.
Coagulation	PT/INR, aPTT, fibrinogen, platelet count, and anticoagulant-specific testing when bleeding, head injury, liver disease, anticoagulant use, or an invasive procedure is relevant.
Lumbar puncture studies	Opening pressure when feasible and indicated; cell count/differential, protein, glucose with paired blood glucose, Gram stain/culture, molecular testing, and additional tests based on immune status and epidemiology.

TEST INTERPRETATION SAFETY: A positive alcohol or drug screen does not prove causation and does not exclude head injury, infection, hypoglycaemia, stroke, or co-ingestion. Many urine screens miss synthetic drugs and may remain positive after impairment has resolved. Order a test only when the result can change management, monitoring, or disposition.

15. Neuroimaging, lumbar puncture, and EEG

15.1 Brain imaging

- Obtain urgent non-contrast CT head when there is head trauma, new focal deficit, sudden severe headache, suspected intracranial haemorrhage, anticoagulant use with concerning symptoms, new seizure with persistent impairment, signs of raised intracranial pressure, known intracranial disease, immunocompromise with concern for a lesion, or persistent unexplained reduced consciousness.
- Use CT angiography and perfusion imaging according to the current stroke pathway when large-vessel occlusion or extended-window reperfusion is being considered. Do not allow a non-focal presentation to delay posterior-circulation stroke assessment.
- Consider MRI when CT is non-diagnostic and concern persists for early ischaemia, posterior fossa disease, encephalitis, demyelination, subtle trauma, hypoxic injury, tumour, or another condition better detected by MRI.
- Image the cervical spine and other body regions according to trauma mechanism, examination, and approved decision rules. Do not clear the cervical spine solely because intoxication seems likely.

15.2 Lumbar puncture

- Perform lumbar puncture promptly when meningitis, encephalitis, subarachnoid haemorrhage after non-diagnostic imaging, inflammatory disease, or another CSF diagnosis is suspected and no contraindication is present.
- Before LP, assess airway, breathing, circulation, consciousness, focal deficit, papilloedema when assessable, recent seizure, immune status, coagulation, platelet count, anticoagulants, and suspected spinal infection or mass.
- Obtain neuroimaging before LP when the approved meningitis/neurology pathway identifies clinically important risk of mass effect or herniation. CT does not prove that LP is safe and a normal CT does not replace clinical assessment.
- Do not delay empiric antimicrobials, dexamethasone when indicated, or acyclovir for an unsafe or delayed LP. Record the reason for delay and the plan to obtain CSF later.

15.3 EEG

- Arrange urgent EEG or transfer to a service able to provide it when consciousness fails to recover after convulsive seizure, subtle repetitive movements or eye deviation persist, unexplained coma continues, or non-convulsive status epilepticus is suspected.
- Continuous EEG is preferred for fluctuating or persistent unexplained coma in critically ill patients when available. Treatment decisions should involve neurology/critical care and must not be delayed when status epilepticus is strongly suspected.

16. Cause-directed emergency treatment

16.1 Stroke and intracranial haemorrhage

- Activate the current stroke pathway immediately; record last-known-well, baseline disability, anticoagulant use, glucose, blood pressure, and stroke severity.
- Arrange urgent brain and vascular imaging and early consultation/transfer for thrombolysis, thrombectomy, neurosurgery, or neurocritical care. Use the current 2026 AHA/ASA or locally adopted stroke guidance rather than fixed treatment assumptions in this protocol.
- For intracranial haemorrhage, reverse anticoagulation promptly when indicated, manage blood pressure under the approved pathway, correct hypoxia and glucose abnormality, and seek neurosurgical/neurocritical advice.

16.2 Seizure and failure to recover

- Treat convulsive status epilepticus at 5 minutes or repeated seizures without recovery. Give a full first-line dose through the fastest safe route and proceed to second-line therapy without avoidable delay.
- Check glucose, sodium, calcium, magnesium, pregnancy status, antiseizure drug adherence, infection, toxin/withdrawal, and structural causes. Avoid repeated subtherapeutic benzodiazepine dosing that delays definitive treatment.
- Persistent coma after motor activity stops is not automatically postictal. Reassess ABCDE, medications, trauma, stroke, infection, metabolic causes, and non-convulsive status; arrange EEG.

16.3 CNS infection

- Use transmission precautions appropriate to the suspected pathogen. Obtain blood cultures promptly, but do not delay antimicrobials.
- Start locally approved empiric therapy for bacterial meningitis and encephalitis based on age, immune status, pregnancy, allergy, renal function, and local resistance. Give adjunctive therapy according to the meningitis pathway.
- Manage sepsis, shock, seizures, raised intracranial pressure, hyponatraemia, and airway compromise concurrently; notify public health and provide contact prophylaxis when required.

16.4 Poisoning, overdose, and withdrawal

- Contact the poison centre or toxicology service early for severe, unknown, sustained-release, mixed, paediatric, intentional, or occupational exposure. Bring medication containers and document estimated time and dose.
- Use toxidromes as clues, not proof. Obtain ECG and repeat it when sodium-channel, potassium-channel, tricyclic, antipsychotic, methadone, stimulant, or unknown ingestion is possible.
- Administer specific antidotes only when indicated and with appropriate monitoring. Routine flumazenil is unsafe in many undifferentiated or mixed overdoses and in benzodiazepine-dependent or seizure-prone patients.

- For alcohol withdrawal, treat early with an approved symptom- and risk-based regimen, thiamine, electrolyte correction, and monitoring. Alcohol intoxication alone does not justify discharge until alternate causes, trauma, aspiration risk, and self-harm are assessed.

16.5 Glucose, electrolyte, and endocrine emergencies

- After treating hypoglycaemia, provide ongoing carbohydrate when safe, review medication and nutrition, monitor for recurrence, and admit or observe when a long-acting agent, renal failure, sepsis, intentional exposure, or unclear cause is present.
- For severe symptomatic hyponatraemia, hypernatraemia, calcium disorder, or hyperkalaemia, use the approved correction protocol with frequent clinical and laboratory reassessment; avoid rapid overcorrection.
- Treat DKA/HHS, adrenal crisis, myxoedema coma, and thyroid storm under their condition-specific protocols. Altered consciousness signals severe disease and generally requires monitored admission and senior review.

16.6 Hypoxia, hypercapnia, and environmental exposure

- Treat the respiratory cause and ventilatory failure. Non-invasive ventilation is inappropriate when the patient cannot protect the airway, cooperate, clear secretions, or is rapidly deteriorating unless used by an expert team with an immediate rescue plan.
- For carbon monoxide, high-concentration oxygen and specialist advice are required; assess pregnancy, syncope, neurological findings, acidosis, cardiac injury, exposure duration, and co-exposed persons.
- For heat stroke, begin rapid active cooling immediately and stop at the locally approved target; for hypothermia, handle gently, prevent further heat loss, rewarm, and follow modified resuscitation guidance.

16.7 Delirium and acute agitation

- Identify and treat pain, hypoxia, infection, urinary retention, constipation, dehydration, medication effects, withdrawal, sleep disruption, sensory impairment, and unfamiliar environmental triggers.
- Provide calm reorientation, visible clocks and lighting, hearing and visual aids, family/caregiver support, hydration, mobility support, and sleep protection when clinically safe.
- Use verbal and non-verbal de-escalation first. If medication is required for immediate safety, use the lowest effective dose from the approved agitation protocol and consider age, frailty, pregnancy, QT interval, Parkinsonism/Lewy body dementia, intoxication, and respiratory risk.

17. Restraint, sedation, and safety

- Use the least restrictive safe intervention. Assign a clinician responsible for the restraint/sedation episode and a nurse responsible for continuous observation and physiological monitoring.
- Before restraining, address immediate medical causes, pain, hypoxia, hypoglycaemia, toileting, communication barriers, fear, crowding, and the need for a familiar person or interpreter.
- Physical restraint should be a brief bridge to assessment and treatment, not a substitute for staffing or medication. Avoid prone restraint and positions that impair ventilation or circulation.
- After emergency sedation, monitor airway, respiratory rate, oxygen saturation, cardiac rhythm, blood pressure, level of consciousness, and capnography when available and indicated. Have airway and resuscitation equipment immediately accessible.
- Document indication, alternatives attempted, consent/capacity or emergency authority, medication and dose, restraint type and position, observations, injuries, review times, hydration/toileting/skin care, release criteria, and debriefing.
- Any unexpected hypoxia, hyperthermia, acidosis, muscle rigidity, collapse, or prolonged unresponsiveness after agitation or restraint requires immediate resuscitation and evaluation for excited delirium-like physiology, stimulant toxicity, serotonin syndrome, neuroleptic malignant syndrome, rhabdomyolysis, or occult illness. Avoid using a syndromic label as a final diagnosis.

18. Special populations

18.1 Children and adolescents

- Use age-specific AVPU/GCS, vital signs, glucose thresholds, medication doses, airway equipment, and paediatric early-warning systems. Hypotension is a late sign of shock.
- Consider sepsis, hypoglycaemia, ingestion, non-accidental injury, meningitis/encephalitis, seizure, diabetic emergency, metabolic disease, and raised intracranial pressure. Ask about access to medicines and household chemicals.
- Persistent lethargy, inconsolability, poor feeding, weak cry, bulging fontanelle, apnoea, abnormal tone, or caregiver concern may represent serious illness even without classic adult signs.
- Involve paediatrics and safeguarding services early and arrange transfer when imaging, intensive care, toxicology, neurology, or child-protection capability is limited.

18.2 Pregnancy and the postpartum period

- Identify pregnancy and postpartum status immediately. Consider eclampsia, stroke, cerebral venous thrombosis, intracranial haemorrhage, sepsis, severe hypertension/PRES, hypoglycaemia, poisoning, and medication effects.
- Maternal stabilization takes priority. Activate obstetrics, anaesthesia, critical care, neonatal services, and transfer early. Fetal assessment should not delay life-saving maternal treatment.
- Use pregnancy-compatible imaging and medication principles, but do not withhold necessary CT, antidotes, seizure treatment, antibiotics, or airway management because of pregnancy.

18.3 Older adults and patients with dementia

- Assume an acute change is delirium until assessed. Obtain baseline information and look for hypoactive presentations, falls, pain, retention, constipation, dehydration, infection, medication toxicity, stroke, subdural haemorrhage, and sensory deprivation.
- Review every medicine, recent prescription, dose change, renal function, adherence, and anticholinergic/sedative burden. Avoid unnecessary catheterization and room moves.
- Dementia does not remove the need for capacity assessment, pain treatment, communication support, or investigation of acute illness. Involve the person who knows the patient best when appropriate.

18.4 Immunocompromised, disabled, and communication-limited patients

- Severe infection or intracranial disease may occur without fever, leukocytosis, neck stiffness, or a typical inflammatory response. Use a lower threshold for imaging, cultures, empiric therapy, and specialist input.
- Provide interpreters, communication boards, hearing/visual aids, and reasonable adjustments. Do not misclassify aphasia, autism, developmental disability, deafness, or language difference as confusion.
- Assess for abuse, neglect, medication error, and caregiver fatigue when the history, injuries, nutrition, hygiene, or living situation raises concern.

19. Monitoring and reassessment

Risk state	Minimum reassessment standard
Red / unstable	Continuous ECG and SpO ₂ ; frequent blood pressure; airway and respiratory observation; GCS/AVPU, pupils, glucose and focal findings at least every 5–15 minutes during active resuscitation and after each intervention, with frequency adjusted to condition.
Yellow / urgent	Repeat full observations, mental status, pain, hydration, mobility/fall risk, and focused examination at least every 30–60 minutes until stable, and immediately after any change.
After naloxone, sedation, seizure treatment, or hypoglycaemia	Use an explicit monitoring period based on agent, recurrence risk, comorbidity, and response. Repeat respiratory assessment, capnography when indicated, glucose, ECG, and neurological status.
During observation	Document whether the patient is improving, unchanged, fluctuating, or deteriorating; compare with baseline and revise the differential and plan.
Trigger for immediate escalation	Any fall in consciousness, new focal deficit, anisocoria, recurrent seizure, vomiting/aspiration, hypoxia, rising CO ₂ , hypotension, fever/hypothermia, severe agitation, arrhythmia, new rash, or failure to improve as expected.

The responsible clinician shall define the next review time, treatment endpoints, stop rules, and escalation trigger. Crowding, diagnostic labels, or awaiting a bed do not reduce monitoring requirements.

20. Consultation, escalation, and transfer

- Call anaesthesia/critical care early for threatened airway, invasive ventilation, refractory seizures, severe poisoning, shock, severe metabolic disturbance, rising intracranial pressure, or need for intensive monitoring.
- Activate neurology/stroke/neurosurgery for focal deficits, suspected stroke or haemorrhage, persistent unexplained coma, non-convulsive status, CNS infection with complications, or a structural lesion.
- Consult toxicology/poison centre for severe or unknown exposure, antidote decisions, sustained-release agents, recurrent opioid toxicity, ECG toxicity, toxic alcohol, pesticide, paediatric ingestion, or occupational/environmental exposure.
- Consult paediatrics, obstetrics, psychiatry, infectious diseases, endocrinology, renal, or hepatology according to the suspected cause and local availability.
- Begin interfacility transfer as soon as a need for unavailable definitive care is identified. Stabilization, imaging, referral, acceptance, and transport preparation should proceed in parallel. Do not delay transfer for non-essential tests.
- Before departure, confirm airway and ventilation plan, vascular access, monitoring, medicines/infusions, imaging transfer, escort competency, deterioration contingencies, receiving clinician, and explicit handover.

21. Disposition

Destination	Minimum criteria
Critical care / resuscitation admission	Airway or ventilatory support; persistent GCS depression; recurrent seizure; shock; severe poisoning; major stroke/haemorrhage; severe infection; dangerous metabolic or temperature disorder; escalating sedation or restraint; need for invasive monitoring.

Destination	Minimum criteria
Ward / monitored admission	Persistent delirium or new cognitive change; unresolved cause; abnormal imaging/laboratory findings; recurrent hypoglycaemia; medication toxicity; unsafe mobility/swallowing; significant comorbidity; inadequate home supervision; need for ongoing treatment or serial assessment.
Observation unit	Selected patients with a defined reversible cause who are improving but require serial neurological/respiratory checks, repeat glucose or ECG, sobriety assessment, medication review, collateral history, or short-term diagnostic clarification.
Discharge	Only when a plausible cause is identified and addressed; patient has returned to baseline or a documented safe new baseline; observations and examination are reassuring; no red flags or recurrence; mobility, swallowing and self-care are safe; capacity is adequate or a lawful supported plan exists; supervision, follow-up, transport, medication reconciliation, and written safety-netting are complete.
Mental-health disposition	Only after medical stabilization and an adequate medical assessment. Transfer of responsibility must include relevant investigations, medication, restraint/sedation, capacity, self-harm/violence risk, and any medical monitoring still required.

UNSAFE DISCHARGE: Do not discharge a patient who remains confused, drowsy, intermittently unresponsive, clinically intoxicated without safe function, unable to ambulate or swallow safely, without a responsible plan, or whose cause and recurrence risk remain materially uncertain.

22. Documentation and handover

- Arrival time, triage category, pathway activation, baseline and last-known-well, collateral sources, and time course.
- Initial and serial AVPU/GCS components, pupils, focal findings, vital signs, glucose, respiratory assessment, temperature, and trauma screen.
- Working diagnosis, dangerous alternatives considered, rationale for imaging/LP/EEG decisions, and reason for any delay.
- All treatments with time, dose/route, response, adverse effects, monitoring, and reassessment—including dextrose, naloxone, seizure therapy, antimicrobials, antidotes, sedation, and restraint.
- Capacity, consent, communication adjustments, family/caregiver involvement, safeguarding, and belongings/medication information.
- Consultations, referral times, acceptance, transfer plan, outstanding results, named result owner, contingency plan, and final condition at departure.
- For discharge: return to baseline, mobility/swallowing, supervision, medication reconciliation, follow-up, written instructions, warning signs, and confirmation of understanding.

23. Quality indicators and audit

Indicator	Suggested measure
Immediate glucose	Percentage of AMS patients with bedside glucose documented within 5 minutes of first clinical assessment.
Consciousness trend	Percentage with initial and repeat AVPU/GCS components and pupils documented when impairment persists.
Airway safety	Time to airway-skilled review for GCS 8 or lower, declining consciousness, or ineffective ventilation.
Time-critical pathway activation	Door-to-stroke activation/imaging; seizure treatment time; antimicrobial time for suspected CNS infection; naloxone/ventilation time for opioid respiratory depression.
Delirium recognition	Percentage of eligible adults with acute change screened using 4AT or approved critical-care tool and diagnosis documented.
Imaging appropriateness	CT/MRI indications documented; delays and unexpected positive findings reviewed.
Reassessment	Percentage with documented response after dextrose, naloxone, antiseizure treatment, sedation, or major intervention.

Indicator	Suggested measure
Restraint safety	Rate, duration, monitoring completeness, injuries, hypoxia, and adverse events associated with restraint or emergency sedation.
Disposition safety	Unplanned ICU transfer, reattendance within 72 hours, aspiration, falls, missed stroke/haemorrhage/infection, recurrent hypoglycaemia, and unexpected death.
Equity	Variation in triage, imaging, restraint, consultation, and outcomes by age, disability, dementia, language, intoxication label, sex, ethnicity, or social vulnerability.

24. Training and implementation

1. Approve local drug, glucose, antidote, seizure, sedation, restraint, meningitis, stroke, head-injury, and transfer algorithms and place them at the point of care.
2. Standardize the neurological observation chart, 4AT/CAM-ICU access, GCS documentation, escalation triggers, and one-page AMS checklist.
3. Ensure 24-hour access or explicit escalation arrangements for glucose testing, ECG, blood gas, CT, essential laboratory tests, poison-centre advice, airway support, and transfer.
4. Train staff using simulations: unresponsive hypoglycaemia, opioid poisoning, posterior-circulation stroke, non-convulsive status, meningitis, agitated delirium, intoxication with occult trauma, paediatric ingestion, and eclampsia.
5. Create a safe low-stimulation observation area with fall prevention, suction, oxygen, monitoring, communication aids, and staff visibility.
6. Run 30-, 60-, and 90-day audits after implementation and review all serious deterioration, restraint injury, missed diagnosis, or unsafe discharge events using a systems-repair approach.
7. Review the protocol after major guideline changes, formulary or equipment changes, new imaging/EEG capability, transfer-network change, or a serious incident.

ANNEX A. One-page altered mental status workflow

Step	Action
1. RECOGNIZE	Acute confusion, abnormal behaviour, reduced interaction, drowsiness, unresponsiveness, or change from baseline.
2. TRIAGE	Red for airway/ventilation threat, GCS 8 or lower or falling, seizure, focal deficit, shock, severe glucose/temperature abnormality, trauma, poisoning, or severe infection.
3. ABCDE	Airway/c-spine; oxygenation and ventilation; circulation; glucose/GCS/pupils; expose for trauma, rash, toxidrome, devices, and temperature.
4. TREAT REVERSIBLE THREATS	Dextrose, ventilatory support, naloxone, seizure treatment, shock treatment, cooling/rewarming, antidote, haemorrhage control.
5. DEFINE TIME + BASELINE	Last known well, onset, progression, baseline cognition/function, collateral history, medications, substances, trauma, infection, pregnancy.
6. LOCALIZE + DIFFERENTIATE	Focal/structural; seizure; infection; respiratory/circulatory; metabolic/endocrine; toxicologic; trauma/environment; delirium/psychiatric.
7. INVESTIGATE	ECG, targeted bloods, CT/vascular imaging when indicated, source imaging, LP when safe, EEG for persistent unexplained impairment.
8. REASSESS	Trend airway, RR/ETCO ₂ , SpO ₂ , BP, temperature, glucose, GCS components, pupils, focal findings, treatment response and trajectory.
9. DISPOSE SAFELY	Critical care/admit/transfer/observe; discharge only at safe baseline with stable function, supervision, follow-up, written safety-netting, and pending-result ownership.

CORE RULE: At every stage: recognize deterioration → call for help → treat immediate threats → reassess → document → communicate → transfer responsibility explicitly.

ANNEX B. Altered mental status danger-sign card

Domain	Danger signs
Airway/ventilation	Snoring/gurgling, pooled secretions, recurrent vomiting, absent cough, RR <8 or >30, shallow breathing, rising CO ₂ , refractory hypoxaemia.
Neurological	Unresponsive, rapidly falling GCS, anisocoria, new focal deficit, gaze deviation, sudden severe headache, repeated seizure, failure to recover.
Circulatory/metabolic	Shock, arrhythmia, glucose severely low/high, severe sodium disturbance, acidosis, rising lactate, renal/hepatic failure.
Infectious	Fever or hypothermia with confusion, neck stiffness, petechiae/purpura, immunocompromise, sepsis physiology, rapidly progressive illness.
Trauma/bleeding	Head injury, anticoagulant use, unexplained fall, scalp/basilar skull signs, unequal movement, persistent vomiting.
Toxic/environmental	Respiratory depression, pinpoint or very large pupils, hyperthermia, diaphoresis/dryness, rigidity/clonus, QRS/QT abnormality, multiple affected persons.
Maternal/paediatric	Pregnancy/postpartum seizure or hypertension; infant lethargy, poor feeding, apnoea, bulging fontanelle; possible ingestion or non-accidental injury.

ANNEX C. First-five-minute checklist

- ☐ Responsiveness and pulse checked; CPR started if needed.
- ☐ Airway opened/suctioned; cervical spine protected if indicated.
- ☐ Respiratory adequacy assessed; oxygen/ventilation provided; capnography considered.
- ☐ ECG, SpO₂, BP, respiratory rate, temperature attached/documented.
- ☐ Bedside glucose obtained and treated if abnormal.
- ☐ AVPU/GCS components, pupils, focal deficit and seizure activity assessed.
- ☐ IV/IO access obtained when needed; urgent samples drawn without delaying treatment.
- ☐ Naloxone, seizure therapy, shock treatment, cooling/rewarming or antidote given when indicated.
- ☐ Last-known-well, onset and baseline sought from collateral sources.
- ☐ Stroke/trauma/sepsis/meningitis/toxicology/obstetric/paediatric pathway activated as indicated.
- ☐ Team leader, recorder and next reassessment time assigned.

ANNEX D. Minimum diagnostic bundle

D1. Every significant or persistent case

- ☐ Complete observations and trend
- ☐ Bedside glucose
- ☐ AVPU/GCS components and pupils
- ☐ Focused neurological and trauma examination
- ☐ ECG
- ☐ Medication/substance review and collateral history
- ☐ Pregnancy status when relevant
- ☐ Documented differential and next reassessment time

D2. Add according to clinical context

- ☐ Blood gas, lactate and capnography
- ☐ CBC, electrolytes, renal/liver function, calcium/magnesium
- ☐ Ketones and osmolality
- ☐ Cultures and source testing
- ☐ Acetaminophen/salicylate and agent-specific levels
- ☐ Coagulation/anticoagulant assessment
- ☐ CT head ± CTA/CTP; trauma imaging
- ☐ Lumbar puncture
- ☐ EEG
- ☐ Carboxyhaemoglobin/methemoglobin
- ☐ Ammonia, cortisol, thyroid testing, CK or other targeted tests

ANNEX E. Airway and coma safety checklist

- ☐ Cause and reversibility considered while airway support proceeds.
- ☐ Protective reflexes, secretions, vomiting, oxygenation, ventilation, trajectory and transport/procedure needs assessed—not GCS total alone.
- ☐ Cervical-spine risk assessed.
- ☐ Preoxygenation and suction ready; difficult-airway and failed-airway plans stated.
- ☐ Haemodynamics optimized; vasopressor/resuscitation support ready when indicated.
- ☐ Induction/paralysis/sedation doses selected for physiology and local formulary.
- ☐ Post-intubation ventilation, capnography, sedation, blood pressure, glucose, pupils and repeat examination planned.
- ☐ Imaging/transfer team informed and receiving capability confirmed.

ANNEX F. Brain-imaging decision support

Decision	Guidance
Urgent non-contrast CT generally indicated	Head trauma; focal deficit; suspected haemorrhage; sudden severe headache; persistent unexplained depressed consciousness; new seizure with delayed recovery; anticoagulation with concerning symptoms; signs of raised ICP; known intracranial disease; immunocompromise with lesion concern.
Add vascular imaging	Suspected acute ischaemic stroke/large-vessel occlusion, subarachnoid haemorrhage pathway, vascular dissection, cerebral venous thrombosis, or another vascular emergency.

Decision	Guidance
Consider MRI	Persistent unexplained AMS after non-diagnostic CT; early/posterior stroke; encephalitis; subtle hypoxic, inflammatory, neoplastic or traumatic disease.
Imaging may be deferred initially	Clear toxic-metabolic cause with rapid complete response, no trauma/focal findings/headache/seizure/high-risk context, and reliable serial reassessment. Persistence or atypical course should lower the threshold.
Never wait for imaging before	Treating hypoglycaemia, inadequate ventilation, seizure, shock, suspected bacterial meningitis/encephalitis, anaphylaxis, severe poisoning, or temperature emergency.

ANNEX G. Lumbar-puncture safety prompts

- ☐ Patient stabilized and airway/ventilation adequate.
- ☐ Indication documented and CSF tests planned.
- ☐ Focal deficit, papilloedema, recent seizure, severe consciousness reduction, immunocompromise, known CNS lesion or other mass-effect risk assessed.
- ☐ Platelet count/coagulation/anticoagulant status reviewed when relevant.
- ☐ Local CT-before-LP criteria applied without using CT as proof that LP is safe.
- ☐ Blood cultures obtained when appropriate.
- ☐ Empiric antimicrobials/acyclovir/dexamethasone not delayed when clinically indicated.
- ☐ Opening pressure and paired blood glucose planned where appropriate.
- ☐ Post-procedure monitoring and result ownership assigned.

ANNEX H. Toxidrome and poisoning prompts

Pattern	Key prompts
Opioid	Respiratory depression, miosis, reduced consciousness; ventilate and titrate naloxone; monitor recurrence.
Sedative-hypnotic	CNS/respiratory depression, ataxia; supportive care; consider mixed ingestion; avoid routine flumazenil.
Anticholinergic	Hot/dry skin, mydriasis, urinary retention, ileus, delirium, tachycardia; ECG, cooling, benzodiazepine for severe agitation/seizure; specialist antidote advice.
Sympathomimetic	Agitation, diaphoresis, mydriasis, hypertension, hyperthermia, chest pain, seizure; benzodiazepine-led control, cooling, cardiac/neurological assessment.
Serotonergic	Clonus, hyperreflexia, agitation, diaphoresis, hyperthermia, diarrhoea; stop agents, sedation/cooling/support, toxicology input.
Neuroleptic malignant syndrome	Rigidity, fever, altered consciousness, autonomic instability, CK elevation; stop agents, cooling/support, critical care.
Cholinergic/pesticide	Secretions, bronchorrhoea, bradycardia, miosis, fasciculation; decontamination/PPE, airway support, antidotes per toxicology protocol.
Sodium-channel toxicity	Wide QRS, arrhythmia, hypotension, seizure; sodium bicarbonate and advanced toxicology/resuscitation protocol.
Toxic alcohol/salicylate	Acidosis, visual symptoms, tachypnoea, tinnitus, altered consciousness; urgent levels/acid-base assessment, antidote and dialysis consultation.

ANNEX I. Paediatric safety prompts

- ☐ Use age-specific normal ranges, GCS, weight in kilograms, glucose and medication dosing.
- ☐ Check airway, breathing, circulation, glucose and temperature before attributing behaviour to tiredness or distress.
- ☐ Ask about feeding, urine output, immunization, fever, seizure duration, trauma, access to medicines, and caregiver observations.
- ☐ Consider ingestion even when not witnessed; obtain acetaminophen concentration in uncertain intentional/accidental ingestion according to local policy.
- ☐ Look for non-accidental injury, neglect, inconsistent history, delay in presentation, or developmentally unexpected exposure.
- ☐ Use family-centred calming and avoid unnecessary separation, but preserve safeguarding and clinical safety.
- ☐ Escalate early for persistent lethargy, recurrent seizure, raised ICP signs, severe dehydration, sepsis, respiratory failure, or need for transfer.

ANNEX J. Maternal altered-consciousness checklist

- ☐ Pregnancy and postpartum interval documented.
- ☐ Blood pressure, urine/protein assessment and eclampsia/PRES considered.
- ☐ Glucose, haemorrhage, sepsis, toxicology, stroke, cerebral venous thrombosis, and medication effects assessed.
- ☐ Magnesium and antihypertensive treatment initiated under the obstetric emergency protocol when indicated.
- ☐ Obstetrics, anaesthesia/critical care, neonatal team and transfer centre contacted early.
- ☐ Maternal airway and circulation prioritized; fetal assessment does not delay resuscitation.
- ☐ Imaging and essential treatment not withheld solely because of pregnancy.

ANNEX K. Older-adult delirium checklist

- ☐ Baseline cognition/function and time course obtained from someone who knows the patient.
- ☐ 4AT completed after immediate threats controlled.
- ☐ Pain, hypoxia, infection, dehydration, constipation, retention, sleep, sensory aids and environment reviewed.
- ☐ Medication reconciliation completed, including recent changes and anticholinergic/sedative burden.
- ☐ Falls/head injury/subdural haemorrhage and stroke considered.
- ☐ Mobility, swallowing, pressure injury, nutrition, continence and safeguarding assessed.
- ☐ Delirium documented and communicated; family/caregiver given explanation and safety plan.

ANNEX L. Observation and discharge checklist

- ☐ Cause identified and treated or sufficiently clarified.
- ☐ Returned to documented baseline or safe expected state.
- ☐ No recurrence during an appropriate observation period.
- ☐ Airway, breathing, circulation, temperature and glucose stable.
- ☐ No focal deficit, concerning trauma, CNS infection, severe headache, recurrent seizure, or high-risk poisoning.
- ☐ Mobility, coordination, swallowing, self-care and toileting safe.
- ☐ Capacity assessed for the disposition decision; self-harm and safeguarding risks addressed.
- ☐ Responsible adult/supervision and safe transport arranged when needed.
- ☐ Medicines reconciled; high-risk drugs and recurrence prevention addressed.
- ☐ Written and verbal return precautions, follow-up and emergency contact information provided.
- ☐ All results reviewed or named clinician/service owns pending results.

ANNEX M. Transfer and handover minimum dataset

Domain	Required information
Identity and context	Identifiers, age/weight, pregnancy status, baseline cognition/function, advance-care information when relevant.
Timeline	Last known well, onset, arrival, deterioration, seizure duration, treatment and response times.
Clinical state	Airway/ventilation, oxygen/ETCO ₂ , haemodynamics, GCS components, pupils, focal findings, temperature, glucose, injuries.
Assessment	Working diagnosis, dangerous alternatives, imaging/LP/EEG status, key results and pending tests.
Treatment	Airway devices, oxygen/ventilation, access, fluids, infusions, dextrose, naloxone, antiseizure therapy, antibiotics, antidotes, sedation/restraint.
Risks and plan	Expected deterioration, recurrence risk, monitoring frequency, next doses/tests, receiving service, result ownership, family communication and safeguarding.

ANNEX N. Audit tool

Audit item	Yes	No	Comments
Immediate visual safety screen and triage category documented	<input type="checkbox"/>	<input type="checkbox"/>	
Bedside glucose within 5 minutes	<input type="checkbox"/>	<input type="checkbox"/>	
Initial and serial AVPU/GCS components and pupils recorded	<input type="checkbox"/>	<input type="checkbox"/>	
Last known well and baseline mental/functional status recorded	<input type="checkbox"/>	<input type="checkbox"/>	
Airway/ventilation assessment and escalation appropriate	<input type="checkbox"/>	<input type="checkbox"/>	
Trauma, focal neurology, seizure, infection and toxicology assessed	<input type="checkbox"/>	<input type="checkbox"/>	
Time-critical treatment given without avoidable delay	<input type="checkbox"/>	<input type="checkbox"/>	
Imaging/LP/EEG indication and timing documented	<input type="checkbox"/>	<input type="checkbox"/>	
4AT or approved delirium tool used when eligible	<input type="checkbox"/>	<input type="checkbox"/>	
Reassessment and trajectory documented after intervention	<input type="checkbox"/>	<input type="checkbox"/>	
Restraint/sedation indication, monitoring and review complete	<input type="checkbox"/>	<input type="checkbox"/>	
Consultation/transfer activated appropriately	<input type="checkbox"/>	<input type="checkbox"/>	
Pending results assigned to a named owner	<input type="checkbox"/>	<input type="checkbox"/>	
Discharge baseline, function, capacity, supervision and safety net documented	<input type="checkbox"/>	<input type="checkbox"/>	
Any return, deterioration, ICU transfer or missed diagnosis reviewed	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX O. Local configuration checklist

- ☐ Approved adult and paediatric glucose treatment concentrations and doses
- ☐ Naloxone routes, titration, infusion, monitoring and take-home supply policy
- ☐ Status epilepticus medication sequence and weight-based doses
- ☐ Stroke activation, imaging, thrombolysis/thrombectomy and transfer network
- ☐ Head-injury CT and neurosurgical transfer criteria
- ☐ Meningitis/encephalitis antimicrobials, dexamethasone, acyclovir and LP criteria
- ☐ Toxicology/poison-centre contact and antidote stock
- ☐ Hypertonic saline and electrolyte emergency protocols
- ☐ Agitation medication, restraint authorization, monitoring and reporting policy
- ☐ 4AT/CAM-ICU forms and staff competency
- ☐ EEG access and non-convulsive status transfer plan
- ☐ Paediatric, obstetric, safeguarding and mental-health escalation pathways
- ☐ Interfacility transport capability for intubated, sedated, vasopressor-dependent or behaviourally high-risk patients

ANNEX P. References and source tools

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4. National Institute for Health and Care Excellence. Delirium: prevention, diagnosis and management in hospital and long-term care. CG103. Updated 2023.
5. National Institute for Health and Care Excellence. Head injury: assessment and early management. NG232. 2023.
6. American Heart Association/American Stroke Association. 2026 Guideline for the Early Management of Patients With Acute Ischemic Stroke. Stroke. 2026.
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8. World Health Organization. WHO Guidelines on Meningitis Diagnosis, Treatment and Care. WHO; 2025.
9. National Institute for Health and Care Excellence. Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management. NG240. 2024.
10. Umpierrez GE, et al. Hyperglycemic Crises in Adults With Diabetes: A Consensus Report. Diabetes Care. 2024;47:1257–1275.
11. Glauser T, et al. Evidence-Based Guideline: Treatment of Convulsive Status Epilepticus in Children and Adults. Epilepsy Curr. 2016;16:48–61.
12. National Institute for Health and Care Excellence. Epilepsies in children, young people and adults. NG217. Current online version.
13. National Institute for Health and Care Excellence. Violence and aggression: short-term management in mental health, health and community settings. NG10. Current online version.
14. Local formulary, antibiogram, poison-centre guidance, stroke network agreements, laboratory handbook, imaging access, restraint policy, safeguarding policy, and interfacility-transfer standards.

LOCAL VALIDATION NOTE: Before approval, a multidisciplinary group should test this pathway against actual staffing, equipment, CT and laboratory hours, medication stock, poison-centre access, paediatric and obstetric capability, EEG and specialist access, ambulance resources, and interfacility transfer times. Any gap that makes the pathway impossible must be corrected operationally or made explicit in the final approved version.